

**Notice of Allowability**

Application No.

10/687,623

Applicant(s)

LEE ET AL.

Examiner

Art Unit

Thuy V. Tran

2821

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/20/2003.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☒ The drawings filed on 20 October 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

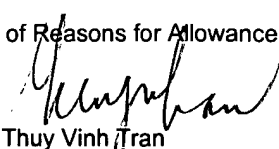
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 10/20/2003
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

  
Thuy Vinh Tran  
Primary Examiner  
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### DETAILED ACTION

This is a response to the Applicants' filing on 10/20/2003. In virtue of this filing, claims 1-20 are currently presented in the instant application.

#### *Examiner's Amendment*

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

This Examiner's Amendment is made to solely correct the typographical errors in the claims to improve antecedent basis and it does not affect or change any scope of the claims as originally filed. It includes:

*Claim 1, line 5, change "a" (third occurrence) to --the--;*

*Claim 1, line 10, change "a" (first occurrence) to --the--;*

*Claim 1, line 12, change "a" (fourth occurrence) to --the--;*

*Claim 1, line 15, change "a" (fourth occurrence) to --the--;*

*Claim 2, line 2, replace "include" with --each includes--;*

*Claim 2, line 3, insert -each-- between "capacitor" (fourth occurrence) and "is";*

*Claim 7, line 8, change "the" (second occurrence) to --a--;*

*Claim 10, line 7, delete " , ";*

*Claim 12, line 2, change "andthe" to --and the--; and*

*Claim 15, line 7, delete " , ".*

***Allowable Subject Matter***

2. Claims 1-20 are allowed.

***Reasons for Allowance***

3. The following is an examiner's statement of reasons for allowance:

Prior art fails to disclose or fairly suggest:

- An apparatus for driving a plasma display panel, which is for applying a driving voltage to a panel capacitor formed between first and second electrodes, the apparatus comprising: (1) a third switch and a fourth switch coupled in series between the first terminal of the panel capacitor and a second power source for supplying a second voltage, the second voltage being a voltage lower than the first voltage, the third switch and the fourth switch having a third capacitor and a fourth capacitor formed between both terminals thereof, respectively; (2) a first diode coupled in a backward direction between a contact of the first switch and the second switch and a third power source for supplying a third voltage, the third voltage being a voltage between the first and second voltages; and (3) a second diode coupled in a forward direction between a contact of the third switch and the fourth switch and the third power source, wherein the first voltage and the second voltage being alternately applied to the first terminal of the panel capacitor when the first switch and the second switch, and the third switch and the fourth switch are alternately turned on, and the first capacitor has a lower capacitance than the second capacitor, and the third capacitor having a higher capacitance than the fourth capacitor, in combination with the

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remaining claimed limitations as called for in independent claim 1 (claims 2-6 are allowed since they are dependent on claim 1);

- An apparatus for driving a plasma display panel, which is for applying a driving voltage to a panel capacitor formed between a first electrode and a second electrode, the apparatus wherein a first electric path is formed between the first switch and the second switch and a third voltage while the first and second switches are turned off to apply the second voltage to the first terminal of the panel capacitor, the third voltage being a voltage between the first and second voltages, and the first capacitor has a lower capacitance than the second capacitor, in combination with the remaining claimed limitations as called for in independent claim 7 (claims 8-14 are allowed since they are dependent on claim 7); and
- A method for driving a plasma display panel, by alternately applying a first voltage and a second voltage to a panel capacitor formed between a first electrode and a second electrode, the method comprising forming a first electric path between a contact of the first switch and the second switch and a third voltage, the third voltage being a voltage between the first voltage and the second voltage, wherein a first capacitor formed between both terminals of the first switch has a lower capacitance than a second capacitor formed between both terminals of the second switch, in combination with the remaining claimed limitations as called for in independent claim 15 (claims 16-20 are allowed since they are dependent on claim 15).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

*Citation of relevant prior art*

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prior art Kang (Pub. No.: US 2003/0156081 A1) discloses an apparatus and method of recovering reactive power of PDP.

Prior art Lee et al. (Pub. No.: US 2003/0025459 A1) discloses an apparatus and method for driving a PDP.

Prior art Choi (U.S. Patent No. 6,806,655) discloses an apparatus and method for driving a PDP.

Prior art Choi (U.S. Patent No. 6,741,238) discloses a power saving circuit for PDP.

Prior art Lee (U.S. Patent No. 6,707,258) discloses an apparatus and method for driving a PDP.

Prior art Kigo et al. (U.S. Patent No. 6,633,285) discloses a driving circuit for driving a PDP.

Prior art Lee (U.S. Patent No. 6,281,635) discloses an apparatus and method for driving a PDP.

Prior art Moon (U.S. Patent No. 6,175,192) discloses an apparatus and method for reducing power consumed during a sustaining discharge.

Prior art Kishi et al. (U.S. Patent No. 5,786,794) discloses a driver for flat display panel.

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***Remark***

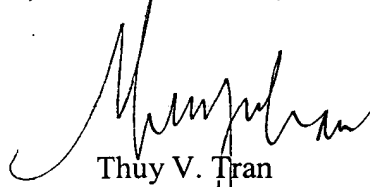
5. Applicants are noted that, prior to preparing the above Examiner's Amendment, the Examiner made a telephone call on 12/11/2004 to Mr. Hae-Chan Park to expectedly discuss about the corrections to be made to the claims. However, no response was provided.

***Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy V. Tran whose telephone number is (571) 272-1828. The examiner can normally be reached on M-F (8:00 AM -5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Thuy V. Tran  
Primary Examiner  
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12/13/2004